

Amendments

In the Claims:

Claims 38-193 (Canceled)

194. (new) A method of stimulating epithelial cells comprising administering to a patient in need thereof an epithelial cell stimulating amount of a glycosylated or unglycosylated keratinocyte growth factor (KGF) polypeptide, wherein said polypeptide comprises (a) amino acids 79-189 of Figure 7 and (b) a sufficient number of consecutive amino acids 32 -78 of Figure 7 to confer on said polypeptide epithelial cell specificity.

195. (new) The method of claim 194, wherein an amount of said polypeptide that stimulates maximal stimulation of BALB/MK keratinocyte cells, stimulates less than one-fold stimulation of NIH/3T3 fibroblasts, as expressed as fold stimulation over background.

196. (new) The method of claim 194, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than 1/50th maximal thymidine incorporation in NIH/3T3 fibroblasts, when maximal thymidine incorporation of NIH/3T3 cells is determined by stimulation with aFGF or bFGF.

197. (new) The method of claim 194, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than 1/10th maximal thymidine incorporation in NIH/3T3 fibroblasts, when maximal thymidine incorporation of NIH/3T3 cells is determined by stimulation with EGF or TGF-alpha.

198. (new) The method of claim 194, wherein the maximal stimulation of BALB/MK keratinocytes by said polypeptide obtained within the concentration range of 0.1 to 3 nanomolar is at least twice that obtained with bFGF within the same concentration range.
199. (new) The method of claim 194, wherein said polypeptide is glycosylated.
200. (new) The method of claim 194, wherein said polypeptide is unglycosylated.
201. (new) The method of claim 194, wherein said polypeptide is formulated in a pharmaceutical composition comprising a pharmaceutically acceptable carrier.
202. (new) A method of stimulating epithelial cells comprising administering to a patient in need thereof an epithelial cell stimulating amount of a glycosylated or unglycosylated keratinocyte growth factor (KGF) polypeptide comprising the amino acid sequence of Figure 7, or a segment of said sequence, wherein said segment comprises a sufficient number of consecutive amino acids 32-78 of Figure 7 to confer on said polypeptide epithelial cell specificity.
203. (new) The method of claim 202, wherein an amount of said polypeptide that stimulates maximal stimulation of BALB/MK keratinocyte cells, stimulates less than one-fold stimulation of NIH/3T3 fibroblasts, as expressed as fold stimulation over background.
204. (new) The method of claim 202, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than 1/50th maximal thymidine incorporation in NIH/3T3 fibroblasts, when maximal thymidine incorporation of NIH/3T3 cells is determined by stimulation with aFGF or bFGF.
205. (new) The method of claim 202, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than 1/10th maximal thymidine incorporation in NIH/3T3 fibroblasts, when maximal

thymidine incorporation of NIH/3T3 cells is determined by stimulation with EGF or TGF-alpha.

206. (new) The method of claim 202, wherein the maximal stimulation of BALB/MK keratinocytes by said polypeptide obtained within the concentration range of 0.1 to 3 nanomolar is at least twice that obtained with bFGF within the same concentration range.
207. (new) The method of claim 202, wherein said polypeptide is formulated in a pharmaceutical composition comprising a pharmaceutically acceptable carrier.
208. (new) The method of claim 202, wherein the polypeptide comprises (a) a sufficient number of amino acids 32-64 of Figure 7 that said polypeptide has epithelial cell specificity, and (b) amino acids 65-194 of Figure 7.
209. (new) The method of claim 208, wherein said polypeptide is formulated in a pharmaceutical composition comprising a pharmaceutically acceptable carrier.
210. (new) The method of claim 208, wherein said polypeptide comprises Met at the amino terminus.
211. (new) The method of claim 208, wherein said polypeptide is unglycosylated.
212. The method of claim 211, wherein said unglycosylated polypeptide is formulated in a pharmaceutical composition comprising a pharmaceutically acceptable carrier.
213. (new) The method of claim 202, wherein the polypeptide consists of (a) a sufficient number of amino acids 32-64 that said polypeptide has epithelial cell specificity, and (b) amino acids 65-194 of Figure 7.
214. (new) The method of claim 213, wherein said polypeptide is formulated in a pharmaceutical composition comprising a pharmaceutically acceptable carrier.
215. (new) The method of claim 213, wherein said polypeptide is unglycosylated.

216. (new) The method of claim 214, wherein said unglycosylated polypeptide is formulated in a pharmaceutical composition comprising a pharmaceutically acceptable carrier.
217. (new) A method of stimulating epithelial cells comprising administering to a patient in need thereof an epithelial cell stimulating amount of a glycosylated or unglycosylated keratinocyte growth factor (KGF) polypeptide comprising amino acids 32-194 of Figure 7.
218. (new) The method of claim 217, wherein said polypeptide is unglycosylated.
219. (new) The method of claim 218, wherein said polypeptide is formulated in a pharmaceutically composition comprising a pharmaceutically acceptable carrier.
220. (new) The method of claim 217, wherein said polypeptide comprises Met at the amino terminus.
221. (new) The method of claim 217, wherein said polypeptide comprises at the amino terminus, amino acids 1-31 of Figure 7.
222. (new) The method of claim 202, wherein said polypeptide consists of amino acids 32-194 of Figure 7.
223. (new) The method of claim 222, wherein said polypeptide is unglycosylated.
224. (new) The method of claim 222, wherein said polypeptide is glycosylated.
225. (new) The method of claim 222, wherein said polypeptide is formulated in a pharmaceutically acceptable carrier.
226. (new) A method of stimulating epithelial cells in wound tissue, the method comprising administering to said wound tissue an epithelial cell stimulating amount of a glycosylated or unglycosylated keratinocyte growth factor (KGF) polypeptide comprising the amino acid sequence of Figure 7 or a segment of said sequence, wherein said

segment comprises a sufficient number of consecutive amino acids 32-78 of Figure 7 to confer on said polypeptide epithelial cell specificity.

227. (new) The method of claim 226, wherein an amount of said polypeptide that stimulates maximal stimulation of BALB/MK keratinocyte cells, stimulates less than one-fold stimulation of NIH/3T3 fibroblasts, as expressed as fold stimulation over background.

228. (new) The method of claim 226, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than 1/50th maximal thymidine incorporation in NIH/3T3 fibroblasts, when maximal thymidine incorporation of NIH/3T3 cells is determined by stimulation with aFGF or bFGF.

229. (new) The method of claim 226, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than 1/10th maximal thymidine incorporation in NIH/3T3 fibroblasts, when maximal thymidine incorporation of NIH/3T3 cells is determined by stimulation with EGF or TGF-alpha.

230. (new) The method of claim 226, wherein the maximal stimulation BALB/MK keratinocytes by said polypeptide obtained within the concentration range of 0.1 to 3 nanomolar is at least twice that obtained with bFGF within the same concentration range.

231. (new) The method of claim 226, wherein the polypeptide comprises (a) a sufficient number of amino acids 32-64 of Figure 7 that said polypeptide has epithelial cell specificity, and (b) amino acids 65-189 of Figure 7.

232. (new) The method of claim 231, wherein said polypeptide is formulated in a pharmaceutical composition comprising a pharmaceutically acceptable carrier.

233. (new) The method of claim 226, wherein said polypeptide is formulated in a pharmaceutical composition comprising a pharmaceutically acceptable carrier.

234. (new) The method of claim 226, wherein said polypeptide further comprises Met at the N-terminus.

235. (new) The method of claim 226, wherein said polypeptide is unglycosylated.

236. (new) The method of claim 235, wherein said unglycosylated polypeptide is formulated in a pharmaceutical composition comprising a pharmaceutically acceptable carrier.

237. (new) The method of claim 226, wherein the polypeptide consists of (a) a sufficient number of amino acids 32-64 of Figure 7 that said polypeptide has epithelial cell specificity, and (b) amino acids 65-194 of Figure 7.

238. (new) The method of claim 237, wherein said polypeptide is unglycosylated.

239. (new) The method of claim 238, wherein said unglycosylated polypeptide is formulated in a pharmaceutical composition comprising a pharmaceutically acceptable carrier.

240. (new) The method of claim 226, wherein said administering is topical administration.

241. (new) The method of claim 240, wherein said polypeptide is topically administered to the skin or eye.

242. (new) The method of claim 241, wherein said polypeptide is topically administered to the skin.

243. (new) The method of claim 241, wherein said polypeptide is topically administered to the cornea of the eye.

244. (new) The method of claim 226, wherein said polypeptide comprises amino acids 32-194 of Figure 7.

245. (new) The method of claim 244, wherein said polypeptide is formulated in a pharmaceutical composition comprising a pharmaceutically acceptable carrier.

246. (new) The method of claim 244, wherein said polypeptide further comprises Met at the N-terminus.
247. (new) The method of claim 244, wherein said polypeptide further comprises at the amino terminus, amino acids 1-31 of Figure 7.
248. (new) The method of claim 226, wherein said polypeptide consists of amino acids 32-194 of Figure 7.
249. (new) The method of claim 248, wherein said polypeptide is unglycosylated.
250. (new) The method of claim 248, wherein said polypeptide is glycosylated.
251. (new) The method of claim 248, wherein said polypeptide is formulated in a pharmaceutically acceptable carrier.
252. (new) A method of inhibiting keratinocyte growth factor (KGF) activity *in vitro*, the method comprising administering to cells a KGF activity-inhibiting amount of a composition, wherein said composition comprises (a) an antibody that binds KGF and (b) a carrier.
253. (new) The method of claim 252, wherein said cells are epithelial cells.
254. (new) The method of claim 253, wherein said epithelial cells are keratinocytes.
255. (new) A method of stimulating epithelial cells *in vitro* comprising contacting epithelial cells with an epithelial cell stimulating amount of a glycosylated or unglycosylated keratinocyte growth factor (KGF) polypeptide, wherein said polypeptide comprises (a) amino acids 79-189 of Figure 7 and (b) a sufficient number of consecutive amino acids 32 -78 of Figure 7 to confer on said polypeptide epithelial cell specificity.
256. (new) The method of claim 255, wherein an amount of said polypeptide that stimulates maximal stimulation of BALB/MK keratinocyte cells, stimulates less than one-

fold stimulation of NIH/3T3 fibroblasts, as expressed as fold stimulation over background.

257. (new) The method of claim 255, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than 1/50th maximal thymidine incorporation in NIH/3T3 fibroblasts, when maximal thymidine incorporation of NIH/3T3 cells is determined by stimulation with aFGF or bFGF.

258. (new) The method of claim 255, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than 1/10th maximal thymidine incorporation in NIH/3T3 fibroblasts, when maximal thymidine incorporation of NIH/3T3 cells is determined by stimulation with EGF or TGF-alpha.

259. (new) The method of claim 255, wherein the maximal stimulation of BALB/MK keratinocytes by said polypeptide obtained within the concentration range of 0.1 to 3 nanomolar is at least twice that obtained with bFGF within the same concentration range.

260. (new) The method of claim 255, wherein said epithelial cells are keratinocytes.

261. (new) The method of claim 194, wherein said polypeptide stimulates a greater difference in fold stimulation of BALB/MK keratinocyte cells relative to NIH/3T3 fibroblasts when compared to the difference in fold stimulation of BALB/MK cells relative to NIH/3T3 cells stimulated by epidermal growth factor (EGF), transforming growth factor-alpha (TGF-alpha), acidic fibroblast growth factor (aFGF) and basic fibroblast growth factor (bFGF), as measured by percent of maximal H³-thymidine incorporation.

262. (new) The method of claim 194 or claim 272, wherein five nanomolar of said polypeptide elicits less than one-fold stimulation over background in NIH/3T3 cells, as measured by percent of maximal H³-thymidine incorporation.

263. (new) The method of claim 202, wherein said polypeptide stimulates a greater difference in fold stimulation of BALB/MK keratinocyte cells relative to NIH/3T3 fibroblasts when compared to the difference in fold stimulation of BALB/MK cells relative to NIH/3T3 cells stimulated by epidermal growth factor (EGF), transforming growth factor-alpha (TGF-alpha), acidic fibroblast growth factor (aFGF) and basic fibroblast growth factor (bFGF), as measured by percent of maximal H³-thymidine incorporation.
264. (new) The method of claim 202, wherein five nanomolar of said polypeptide elicits less than one-fold stimulation over background in NIH/3T3 cells, as measured by percent of maximal H³-thymidine incorporation.
265. (new) The method of claim 255, wherein said polypeptide stimulates a greater difference in fold stimulation of BALB/MK keratinocyte cells relative to NIH/3T3 fibroblasts when compared to the difference in fold stimulation of BALB/MK cells relative to NIH/3T3 cells stimulated by epidermal growth factor (EGF), transforming growth factor-alpha (TGF-alpha), acidic fibroblast growth factor (aFGF) and basic fibroblast growth factor (bFGF), as measured by percent of maximal H³-thymidine incorporation.
266. (new) The method of claim 255 or 273, wherein five nanomolar of said polypeptide elicits less than one-fold stimulation over background in NIH/3T3 cells, as measured by percent of maximal H³-thymidine incorporation.
267. (new) A method of stimulating epithelial cells comprising administering to a patient in need thereof an epithelial cell stimulating amount of a glycosylated or unglycosylated Keratinocyte Growth Factor (KGF) polypeptide comprising the amino acid sequence of Figure 7, or a segment of said sequence, wherein said polypeptide has mitogenic activity on BALB/MK keratinocyte cells.
268. (new) The method of claim 267, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than one-fold stimulation over background in NIH/3T3 fibroblasts.

269. (new) The method of claim 267, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than $1/50^{\text{th}}$ of the maximal thymidine incorporation in NIH/3T3 cells stimulated by aFGF or bFGF.

270. (new) The method of claim 267, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than $1/10^{\text{th}}$ of the maximal thymidine incorporation in NIH/3T3 fibroblasts stimulated by EGF or TGF-alpha.

271. (new) The method of claim 267, wherein the maximal thymidine incorporation in BALB/MK keratinocytes stimulated by said polypeptide obtained within the concentration range of 0.1 to 3 nanomolar is at least twice that obtained with bFGF within the same concentration range.

272. (new) A method of stimulating epithelial cells comprising administering to a patient in need thereof an epithelial cell stimulating amount of a glycosylated or unglycosylated keratinocyte growth factor (KGF) polypeptide, wherein said polypeptide comprises (a) amino acids 65-189 of Figure 7 and (b) a sufficient number of consecutive amino acids 32 -64 of Figure 7 to confer on said polypeptide epithelial cell specificity.

273. (new) A method of stimulating epithelial cells *in vitro* comprising contacting epithelial cells with an epithelial cell stimulating amount of a glycosylated or unglycosylated keratinocyte growth factor (KGF) polypeptide, wherein said polypeptide comprises (a) amino acids 65-189 of Figure 7 and (b) a sufficient number of consecutive amino acids 32 -64 of Figure 7 to confer on said polypeptide epithelial cell specificity.

274. (new) A method of stimulating epithelial cells comprising administering to a patient in need thereof an epithelial cell stimulating amount of a keratinocyte growth factor (KGF) polypeptide prepared by expressing a DNA encoding a polypeptide comprising amino acids 32 - 194 of Figure 7.

275. (new) The method of claim 274, wherein said DNA encodes a Met at the amino terminus.

276. (new) The method of claim 274, wherein said DNA is operably linked to a recombinant KGF promoter.

277. (new) The method of claim 274, wherein said DNA is expressed in a bacterial cell, a fungal cell, a mammalian cell or an insect cell.

278. (new) A method of stimulating epithelial cells comprising administering to a patient in need thereof an epithelial cell stimulating amount of a keratinocyte growth factor (KGF) polypeptide comprising amino acids 32 to 194 of Figure 7 or a segment of said polypeptide, wherein said polypeptide and said segment of said polypeptide have mitogenic activity on BALB/MK cells.

279. (new) The method of claim 278, wherein said polypeptide comprises Met at the amino terminus.

280. (new) The method of claim 278, wherein five nanomolar concentration of said polypeptide elicits less than one-fold stimulation over background in NIH/3T3 cells.

281. (new) The method of claim 278, wherein said KGF is capable of stimulating DNA synthesis in quiescent BALB/MK epidermal keratinocytes at a concentration of 0.1 nM.

282. (new) The method of claim 278, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than one-fold stimulation over background in NIH/3T3 fibroblasts.

283. (new) The method of claim 278, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than 1/50th of the maximal thymidine incorporation in NIH/3T3 cells stimulated by aFGF or bFGF.

284. (new) The method of claim 278, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates

less than 1/10th of the maximal thymidine incorporation in NIH/3T3 fibroblasts stimulated by EGF or TGF-alpha.

285. (new) The method of claim 278, wherein the maximal thymidine incorporation in BALB/MK keratinocytes stimulated by said polypeptide obtained within the concentration range of 0.1 to 3 nanomolar is at least twice that obtained with bFGF within the same concentration range.

286. (new) A method of stimulating epithelial cells comprising administering to a patient in need thereof an epithelial cell stimulating amount of a keratinocyte growth factor (KGF) polypeptide comprising amino acids 32-194 of Figure 7 or a segment of said polypeptide, wherein the segment is that part of the amino acid sequence of Figure 7 that remains after the amino acid sequence of Figure 7 is truncated from an N terminus to C terminus direction, within the region of amino acids 32-78.

287. (new) The method of claim 286, wherein said polypeptide comprises Met at the amino terminus.

288. (new) The method of claim 286 wherein said polypeptide and said segment of said polypeptide has mitogenic activity on BALB/MK keratinocyte cells.

289. (new) The method of claim 286, wherein said polypeptide stimulates mitogenic activity on epithelial cells.

290. (new) A method of stimulating epithelial cells comprising administering to a patient in need thereof an epithelial cell stimulating amount of a keratinocyte growth factor (KGF) polypeptide comprising a keratinocyte growth factor (KGF) polypeptide comprising amino acids 32-194 of Figure 7 or a segment of said polypeptide, wherein the segment is that part of the amino acid sequence of Figure 7 that remains after the amino acid sequence of Figure 7 is truncated from the C terminus toward the N terminus, within the region of amino acids 194 to 189.

291. (new) The method of claim 290, wherein said polypeptide comprises Met at the amino terminus.

292. (new) The method of claim 290, wherein said polypeptide and said segment of said polypeptide have mitogenic activity on BALB/MK keratinocyte cells.

293. (new) The method of claim 290, wherein said polypeptide and said segment of said polypeptide stimulates mitogenic activity in epithelial cells.

294. (new) A method of stimulating epithelial cells comprising administering to a patient in need thereof an epithelial cell stimulating amount of a keratinocyte growth factor (KGF) polypeptide comprising amino acids 32-194 of Figure 7 or a segment of said polypeptide, wherein the segment is that part of the amino acid sequence of Figure 7 that remains after the amino acid sequence of Figure 7 is truncated from an N terminus to C terminus direction, within the region of amino acids 32-78 and is truncated from the C terminus toward the N terminus, within the region of amino acids 194 to 189.

295. (new) The method of claim 294, wherein said polypeptide comprises Met at the amino terminus.

296. (new) The method of claim 294, wherein said polypeptide and said segment of said polypeptide have mitogenic activity on BALB/MK keratinocyte cells.

297. (new) The method of claim 294, wherein said polypeptide and said segment of said polypeptide stimulates mitogenic activity in epithelial cells.

298. (new) A method of stimulating epithelial cells comprising administering to a patient in need thereof an epithelial cell stimulating amount of a keratinocyte growth factor (KGF) polypeptide, wherein said polypeptide is prepared by expressing a DNA encoding a polypeptide comprising amino acids 32-194 of Figure 7 or a segment of said polypeptide, wherein the segment is that part of the amino acid sequence of Figure 7 that remains after the amino acid sequence of Figure 7 is truncated from an N terminus to C terminus direction, within the region of amino acids 32-78.

299. (new) The method of claim 298, wherein the DNA is expressed in a bacterial cell, a fungal cell, a mammalian cell or an insect cell.

300. (new) The method of claim 298, wherein said DNA encodes Met at the amino terminus.

301. (new) The method of claim 298, wherein said polypeptide and said segment of said polypeptide has mitogenic activity on BALB/MK keratinocyte cells.

302. (new) A method of stimulating epithelial cells comprising administering to a patient in need thereof an epithelial cell stimulating amount of a keratinocyte growth factor (KGF) polypeptide comprising amino acids 32 to 194 of Figure 7 or a segment of said polypeptide, wherein said polypeptide and said segment of said polypeptide stimulates mitogenic activity in epithelial cells.

303. (new) The method of claim 302, wherein said polypeptide comprises Met at the amino terminus.

304. (new) The method of claim 302, wherein said polypeptide is a segment of the polypeptide of Figure 7.

305. (new) The method of claim 302, wherein five nanomolar concentration of said polypeptide elicits less than one-fold stimulation over background in NIH/3T3 cells.

306. (new) The method of claim 302, wherein said KGF is capable of stimulating DNA synthesis in quiescent BALB/MK epidermal keratinocytes at a concentration of 0.1 nM.

307. (new) The method of claim 302, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than one-fold stimulation over background in NIH/3T3 fibroblasts.

308. (new) The method of claim 302, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates less than 1/50th of the maximal thymidine incorporation in NIH/3T3 cells stimulated by aFGF or bFGF.

309. (new) The method of claim 302, wherein an amount of said polypeptide that stimulates maximal thymidine incorporation in BALB/MK keratinocyte cells, stimulates

less than 1/10th of the maximal thymidine incorporation in NIH/3T3 fibroblasts stimulated by EGF or TGF-alpha.

310. (new) The method of claim 302, wherein the maximal thymidine incorporation in BALB/MK keratinocytes stimulated by said polypeptide obtained within the concentration range of 0.1 to 3 nanomolar is at least twice that obtained with bFGF within the same concentration range.

311. (new) A method of stimulating epithelial cells comprising administering to a patient in need thereof an epithelial cell stimulating amount of a keratinocyte growth factor (KGF) comprising a segment of amino acids 32-194 of Figure 7, wherein the segment is that part of the amino acid sequence of Figure 7 that remains after the amino acid sequence of Figure 7 is truncated from an N terminus to C terminus direction, within the region of amino acids 32-78, and wherein said polypeptide is unglycosylated.

312. (new) The method of one of claims 274-275, 276-297, 298-310, wherein said polypeptide is unglycosylated.

313. (new) The method of one of claims 274-275, 276-297, 298-310, wherein said polypeptide is glycosylated.

314. (new) The method of one of claims 194, 202, 208, 213, 217, 221, 226, 231, 237, 247, 248, 252, 255, 272 or 273 which comprises met at the amino terminus.